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## Original Article



# Association of sociodemographic and clinical factors with the self-image and self-esteem of individuals with intestinal stoma

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## ABSTRACT

**Objective:** To evaluate the clinical and sociodemographic factors and correlate them to the self-image and self-esteem.

**Methods:** A study conducted at Ostomy Pole of Pouso Alegre. The data were collected between December 2012 and May 2013. This was a non-probabilistic, by convenience, sample. For data collection, the Rosenberg Self-Esteem Scale/UNIFESP-EPM and Body Investment Scale were used. For statistical analysis, chi-squared test, Kruskal–Wallis test and Spearman correlation were used. Levels of significance of 5% ( $p \leq 0.05$ ) were considered.

**Results:** Participants had a mean score of 10.81 in the Rosenberg Self-Esteem Scale/UNIFESP. Regarding Body Investment Scale results, the mean total score was 38.79; the mean in the domain of body image was 7.74, and for personal touch, 21.31. When comparing data related to the stoma and sociodemographic profiles with the Rosenberg Self-Esteem Scale/UNIFESP and Body Investment Scale, we realize that all patients demonstrated a decrease in self-esteem and self-image. Individuals were over 60 years old, male, retired, married and were not participants in support group/association. With regard to the characteristics of the stoma, those permanent colostomized had as causes of stoma implementation inflammatory disease and neoplasia; stomata measured between 20 and 40 mm; these people used two-piece devices. People who have not been notified that would be subjected to the stoma and in whom no demarcation was done showed worsening in self-esteem and self-image in relation to other features related to injury and sociodemographic data.

**Conclusion:** Patients who participated in this study had low self-image and self-esteem in all characteristics of the stoma and in sociodemographic data, meaning that these individuals had negative feelings about their own bodies.

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## Associação dos fatores sociodemográficos e clínicos à autoimagem e autoestima dos indivíduos com estoma intestinal

### R E S U M O

#### Palavras-chave:

Estomia  
Qualidade de vida  
Imagem corporal  
Autoimagem  
Autoestima

**Objetivo:** Avaliar os fatores sociodemográficos e clínicos e correlacioná-los à autoimagem e autoestima.

**Métodos:** Estudo realizado no Polo dos Estomizados de Pouso Alegre. Os dados foram coletados entre dezembro de 2012 e maio de 2013. A amostra foi por não probabilística, por conveniência. Para coleta de dados, foram utilizadas a Escala de Autoestima Rosenberg/UNIFESP-EPM e a escala BodyInvestmentScale. Para análise estatística, foram utilizados os testes do Qui-quadrado e de Kruskal-Wallis e a correlação de Spearman. Foram considerados os níveis de significância 5% ( $p \leq 0,05$ ).

**Resultados:** Os participantes apresentaram a média de 10,81 na Escala de Autoestima Rosenberg/UNIFESP-EPM. Com relação à escala BodyInvestmentScale, a média do escore total foi 38,79; a médiana dos domínios imagem corporal foi de 7,74 e no toque pessoal, 21,31. Ao compararmos os dados relacionados ao estoma e sociodemográficos com a Escala de Autoestima Rosenberg/UNIFESP-EPM e com escala BodyInvestmentScale, percebemos que todos os pacientes apresentaram queda na autoestima e na autoimagem. Os indivíduos estavam na faixa etária acima de 60 anos, sexo masculino, eram aposentados e casados e não participavam de grupo de apoio/associação. Com relação às características do estoma, os indivíduos com colostomia permanente tinham como causas da realização do estoma doença inflamatória e neoplasia; os estomas mensuravam entre 20 a 40 mm; eles utilizavam dispositivo com duas peças. Pessoas que não foram comunicadas de que iriam ser submetidas ao estoma, e em que não foi realizada a demarcação apresentaram piora na autoestima e na autoimagem com relação às outras características relacionadas à lesão e às sociodemográficas.

**Conclusão:** Pacientes que participaram deste estudo apresentaram baixa na autoimagem e autoestima em todas as características do estoma e nos dados sociodemográficos, significando que esses indivíduos tinham sentimentos negativos em relação ao próprio corpo.

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## Introduction

Undoubtedly the technological and scientific advances in health, as well as the process of demographic and epidemiological transition, enabled an increase in life expectancy of the population in recent years. In this twenty-first century, there are still huge and relevant problems that continue to affect the health of people worldwide and also in Brazil. These implications of scientific and technological development in people's living conditions have been worrying to researchers,<sup>1</sup> primarily those related to the ostomy theme. These concerns are about the effectiveness of therapeutic interventions, complications, devices used, self-care, but also with the improvements made in quality of life, self-esteem, self-image and sexuality of these individuals, especially those who have degenerative and not degenerative diseases.<sup>1,2</sup>

Stoma and ostomy are Greek terms meaning mouth or opening. It is a change in bowel habits, anatomically modified, in which there is an externalization of hollow viscera through the body; in the case of the intestine, the device is inserted into the outer abdominal wall,<sup>3</sup> and may be temporary or permanent. Temporary stomas aim to protect an intestinal anastomosis and can be reversed. The permanent stomas usually are indicated in cases of intestinal cancer

without the possibility of reestablishment of normal intestinal transit.<sup>4</sup>

Usually, these individuals who underwent intestinal stoma, breaking with this usual elimination pattern, are faced with emotional and psychological difficulties and feel a sense of disgust in relation to themselves.<sup>5</sup>

Besides the emotional and psychological changes, the ostomy generates a series of physical changes that impair social life of stoma users, especially those related to the lack of the anus and the presence of a hole in the abdomen through which the feces are eliminated. As a result, not infrequently the person feels very different from the others, and even excluded. This is because every human being constructs, throughout his life, an image of his own body, which fits to the customs and the environment where he lives – in short that meet his needs to feel nestled in his own world.<sup>6</sup>

In our modern society, the body image can be related to youth, beauty, strength, integrity and health; and those that do not correspond to the concept of body beauty can experience significant sense of rejection.<sup>7,8</sup> Body image is the mental picture that the individual makes of his own body, wrapped by the sensations and experiences throughout his life. It is a kind of “mental picture” constructed by the person for his physical appearance and the attitudes and feelings towards the image.<sup>6-9</sup>

The individual, in coming to terms with an intestinal stoma, suffer changes in his body image, self-esteem and sexuality, as he is eliminating feces and gases through the abdomen. Thus, he starts a new life in different living conditions associated with disability and loss, feeling worthless, ashamed of other people and ending in isolation with respect to family, friends and leisure activities, and changing his quality of life. When a person has healthy self-esteem and body image, he deals easily with its present living situation and carry on leaving an existence without trauma.

This study aimed to evaluate the clinical and sociodemographic factors and correlate them to the self-image and self-esteem.

## Methods

This is a primary, descriptive, analytical, prospective clinical study.

This study was conducted at the Ostomy Pole of Pouso Alegre. The data were collected in the period between December 2012 and May 2013, after approval by the Ethics Committee, Universidade do Vale do Sapucaí, Opinion No. 23,277. The sample was selected in a non-probabilistic, for convenience, way. The data collection was conducted by researchers themselves, after all patients have signed the informed consent form. In this study, the inclusion criteria were:  $\geq 18$  years old and carry an intestinal stoma. Exclusion criteria were: patients with syndromes of dementia and other conditions that would prevent them to understand and answer the questionnaires.

Three instruments to collect data for the survey were used. First, a questionnaire on sociodemographic data and characteristics of the stoma was used; then, the Rosenberg Self-Esteem Scale/UNIFESP-EPM (RSES) was used; and third, the Body Investment Scale (BIS) was applied.

The Rosenberg scale is a scale used in several studies on self-esteem.<sup>10,11</sup> This is a one-dimensional scale translated and adapted in Brazil by Diniet al.<sup>12</sup> to be used in their work, and which was applied in a population of patients who would undergo plastic surgery.<sup>12–14</sup> Rosenberg Scale is a Likert-type 4-point scale (1 = I strongly agree, 2 = I agree, 3 = I disagree, 4 = I strongly disagree), containing 10 items. Of this total of items, five assess the individual's positive feelings about himself (in general: I am satisfied with myself; I feel I have a bit of good qualities; I am able to do things as well as most other people, provided that I'm taught to do them; I feel I am a worthy person, at least on a plane like other people; I have a positive attitude toward myself) and five assess negative feelings (Sometimes I think I'm no good; I do not feel satisfaction in the things that I accomplish; I feel that I have not much to be proud of; Sometimes I really feel useless, unable to do things; I would like to have more respect for myself, I'm almost always inclined to think I'm a loser). To score the responses, the five items expressing positive feelings have inverted values, which, added to the other five, total a single value for the scale. This scale consists of ten statements with four response options. Each alternative has a value ranging from zero to three. Thus, the scale presents a final score of 0 to 30, where 0 is the best value for self-esteem and 30 the worst.

The Brazilian version of the Body Investment Scale (BIS) consists of 20 items divided into three domains (body image, body care and body touch). The answers are arranged in a five-point Likert scale, ranging from "I strongly disagree" (1 point) to "I strongly agree" (5 points). To obtain the final score of the scale, one must reverse the scores of items 2, 5, 9, 11, 13 and 17 and add up all the items. The higher the score, the greater the positive feeling toward the body.<sup>13</sup>

When assessing the results, the data were entered and analyzed using the SPSS – 8.0 statistical program. For the statistical analysis, the following tests were also used: Chi-squared test for socio-demographic variables and characteristics of the stoma; and in order to compare between the Rosenberg Self-Esteem Scale/UNIFESP and Body Investment Scale and sociodemographic and clinical data, the Kruskal-Wallis test and Spearman correlation were used. For all statistical tests, we considered a 5% level as significant ( $p \leq 0.05$ ).

## Results

The results will be presented initially based on sociodemographic characterization and then by characterization of patients with intestinal stoma and finally by assessment of self-esteem and self-image.

In Table 1, most participants had over 60 years, were male, retired, and attending to support groups. Twenty-one (30%) of respondents were illiterate and 19 (25.10%) could read and write.

It is observed in Table 2 that most of the causes that led patients to acquire ostomy were cases of neoplasia; the type of ostomy was a permanent colostomy. Most individuals were not told they would be submitted to the stoma. In addition, individuals were not subject to the demarcation of the stoma and did not undergo irrigation. Regarding the type of complication, 34 (48.60%) had dermatitis; 14 (20%) had retraction; and 13 (18.60%) suffered prolapse. With respect to the diameter of the stoma, 34 (48.60%) had 20–40 mm; and 23 (32.90%) 40–60 mm.

In Table 3, we can see in face of the responses of our participants that the mean of Rosenberg Self-Esteem Scale/UNIFESP-EPM was 10.81, implying that these individuals had low self-esteem. As regards to the Body Investment Scale, in the domains body image and personal touch the mean was low, meaning that these individuals had negative feelings about their own bodies.

In Table 4, we find a comparison among data of the stoma and the scales used in this study, where it is possible to observe that all patients showed changes in self-esteem and self-image with respect to characteristics of the stoma; however, individuals with permanent colostomy had neoplasia and inflammatory disease as causes to perform the stoma; in addition, their stomata had diameters between 20 and 40 mm. These participants used two-piece devices. Those who were not told they would be subjected to the stoma and in whom the demarcation was not performed exhibited worsening in self-esteem and self-image.

From Table 5, it can be inferred that all the patients showed changes in self-esteem and self-image. The participants had over 60 years, male gender, with incomplete

**Table 1 – Socio-demographic characteristics of individuals with intestinal stoma.**

Variable	p	N	% Overall	% Valid	% Cumulative
Gender					
Male	0.003	52	74.3	74.3	100.0
Female		18	25.7	25.7	25.7
Total		70	100.0	100.0	
Age groups					
44–59 years	0.057	17	24.3	24.3	24.3
60–67 years		18	25.7	25.7	50.0
68–74 years		16	22.9	22.9	72.9
75 to 85 years		19	27.1	27.1	100.0
Total			70	100.0	100.0
Marital status					
Married	0.035	34	48.6	48.6	48.6
Separated		14	20.0	20.0	68.6
Widow(er)		22	31.4	31.4	100.0
Total		70	100.0	100.0	
Occupation					
Retired	0.003	50	71.4	73.5	73.5
Unemployed		4	5.7	5.9	79.4
At work		14	20.0	20.6	100.0
Total			68	97.1	100.0
No answer			2	2.9	
Total		70	100.0		
Participation in support group/association					
Yes	0.075	38	54.3	54.3	54.3
No		32	45.7	45.7	100.0
Total			70	100.0	100.0
Total		70	100.0	100.0	
Chi-squared test ( $p \leq 0.05$ ).					

Chi-squared test ( $p \leq 0.05$ ).

primary education, employed and married. Patients who were not participating in support group/association presented worse self-esteem and self-image in relation to other patients.

## Discussion

In terms of sociodemographic characteristics of the study participants, most participants had over 60 years, of male gender and retirees, and participating in support groups. Only 21 (30%) of respondents were illiterate and nineteen (25.10%) could read and write; these findings corroborate several studies. Regarding stoma features, most of the causes that led patients to have an ostomy performed were neoplasms; the type of ostomy was permanent colostomy. Most individuals did not know that would be submitted to the stoma. In addition, the individuals were not subject to the demarcation of the stoma. Regarding the type of complication, 34 (48.60%) had dermatitis; 14 (20%), retraction and 13 (18.60%), prolapse. With respect to the diameter of the stoma, 34 (48.60%) had 20–40 mm, and 23 (32.90%), 40–60 mm. These findings coincide with results of several studies.<sup>2,4,5,7,14–17</sup>

The increase in the elderly population, which is currently taking place in Brazil, tends to cause social and economic changes and an increase in chronic diseases, for example diabetes mellitus, hypertension, trauma and cancer; the latter two can cause the patient to undergo a surgical procedure for removing fecal contents by the abdominal wall. In my experience as a stomatherapist nurse, I have realized that when

the individual is subjected to the preparation of the stoma, a breakup happens automatically from his elimination pattern, and often the patient has psychological and social changes, experiencing feelings of disgust, resulting in social and family isolation and in leisure loss. Such feelings have as a consequence changes of self-image, self-esteem, sexuality and quality of life.

In psychic alterations, the change in self-image is one aspect that stands out, since the patient will need to reset his body image, manner of dress and of interacting with his own body. As regards to the social aspect, the presence of the stoma affects both at the family level, as in the patient's leisure and work activities. Changes in leisure activities relate mostly to the shame or to the apparent presence of gas in the bag.

I believe it is pertinent to transcribe here the speech of a patient during an interview, that moved me: "First I was very sad to look at my belly and see feces and gases coming out, I was very traumatized, I felt filthy, ugly and in my body something that was not mine was there. In the early years I was ashamed and I isolated myself and did not let any person see my belly and touch me, only my wife could touch me because she helped to change the bag and clean my skin and stoma".

The research participants' answers related to the Rosenberg Self-Esteem Scale/UNIFESP-EPM obtained a mean of 10.81, implying that these subjects had low self-esteem. With regard to the Body Investment Scale in the fields of body image and personal touch, the mean was low, meaning that these individuals had negative feelings about their own bodies.

**Table 2 – Characteristics of the intestinal stoma.**

Variable	p	N	% Overall	% Valid	% Cumulative
Cause of ostomy					
Diverticulitis	0.003	3	4.3	4.3	4.3
Inflammatory bowel disease		5	7.1	7.1	11.4
Neoplasia		52	74.3	74.3	85.7
Crohn's disease		10	14.3	14.3	100.0
Total		70	100.0	100.0	
Type of stoma					
Colostomy	0.007	54	77.1	77.1	77.1
Ileostomy		16	22.9	22.9	100.0
Total		70	100.0	100.0	
Diameter of the stoma					
0 to 20 mm	0.056	10	14.3	14.3	14.3
20 to 40 mm		34	48.6	48.6	62.9
40 to 60 mm		23	32.9	32.9	95.7
60 to 80 mm		3	4.3	4.3	100.0
Total		70	100.0	100.0	
Complication type					
Dermatitis	34	48.6	48.6	48.6	34
Fistula	1	1.4	1.4	50.0	1
Peristomal hernia	5	7.1	7.1	57.1	5
Pseudo-verrucous	0.0023	1	1.4	1.4	58.6
Allergic reaction to device		1	1.4	1.4	60.0
Pseudo-verrucous injuries/dermatitis		1	1.4	1.4	61.4
Retraction		14	20.0	20.0	81.4
Prolapse		13	18.6	18.6	100.0
Total		70	100.0	100.0	
Demarcation was carried out					
Yes	0.002	17	24.3	24.3	24.3
No		53	75.7	75.7	100.0
Total		70	100.0	100.0	
Device type					
Single System	0.043	22	31.4	31.4	31.4
Two Parts		48	68.6	68.6	100.0
Total		70	100.0	100.0	
Makes irrigation					
Yes	0.047	26	37.1	37.1	37.1
No		44	62.9	62.9	100.0
Total		70	100.0	100.0	
It was reported that you have a stoma					
Yes	0.049	48	68.6	68.6	68.6
No		22	31.4	31.4	100.0
Total		70	100.0	100.0	
Stoma characteristic					
Temporary	0.003	18	25.7	25.7	25.7
Definitive		52	74.3	74.3	100.0
Total		70	100.0	100.0	
Chi-squared test ( $p \leq 0.05$ ).					

Chi-squared test ( $p \leq 0.05$ ).

By having the anatomical structure modified, the ostomised individual also is faced with his conflicts and fantasies according to the image he makes of his own body, as well as according to the image that people who surround him make of him.<sup>18</sup> This fact favors the loss of self-esteem, since when dealing with colostomy, people's attention stays focused on the values related to intestinal elimination, and a thing that before was considered as something natural becomes the object of reflection and must be reassessed.<sup>19</sup>

Social isolation is something visible; however, it is important to note that given this reality, it is imperative the need of social interaction, as this process will help to restore the perception related to the ostomised body and its own self-image and, mainly, will contribute to overcoming the loneliness.<sup>20</sup> The maintenance and, perhaps, the expansion of his social network will provide distraction and satisfaction, which favors the recovery of hope and a continuous search for a better quality of life.<sup>16</sup>

Rosenberg Self-Esteem Scale/UNIFESP Dominium		Body Investment Scale Dominium				p-Value
		Total score	Body image	Personal care	Personal touch	
Mean	10.81	38.79	7.74	21.31	10.19	0.002
Median	11.00	39.00	8.00	21.00	10.00	
Mode	11	36	9	19	10	
Standard Deviation	5.395	6.057	3.077	6.342	3.965	
Kruskal-Wallis and Spearman tests ( $p \leq 0.05$ ).						

With regard to the characteristics of the stoma, individuals with permanent colostomy had as their cause for stoma application neoplasia and inflammatory disease; the stomata measured 20–40 mm. Those users of two-piece devices were not communicated that they would be subjected to the stoma and the demarcation was not performed. They

[illegible]



**Table 5 – Comparison between groups according to demographic data and Rosenberg Self-Esteem Scale/UNIFESP-EPM and Herth Hope Scale in individuals with intestinal stoma.**

	Rosenberg Self-Esteem Scale/UNIFESP			Body Investment Scale			p-Value
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	
<i>Age group</i>							
<59 years	12.67	12.0	8.102	40.31	40.0	2.549	0.034
60–67 years	10.00	11.0	4.664	38.22	37.0	7.818	
68–74 years	10.19	11.0	3.176	37.00	38.0	6.245	
≥75 years	10.32	11.0	4.151	39.63	38.0	6.057	
Total	10.00	11.0	5.395	38.79	39.0	6.057	
<i>Gender</i>							
Female	11.26	11.0	5.915	39.71	39.0	5.834	0.260
Male	10.39	11.0	4.901	37.92	38.0	6.217	
Total	10.81	11.0	5.395	38.79	39.0	6.057	
<i>Marital status</i>							
Married	10.41	11.0	5.082	35.21	37.0	4.264	0.017
Separate	11.71	12.0	3.811	40.47	41.5	5.945	
Widow(er)	10.86	11.0	6.728	38.45	39.0	6.368	
Total	10.81	11.0	5.395	38.79	39.0	6.057	
<i>Schooling</i>							
Illiterate	11.33	11.0	5.877	40.06	43.0		0.034
Can read and write	12.72	13.0	4.039	39.53	38.0		
Incomplete primary education	9.26	11.0	5.039	38.18	36.0		
Incomplete secondary education	9.09	6.0	6.580	37.71	38.0		
Total	10.77	11.0	5.421	38.90	39.0		
<i>Occupation</i>							
Retired	11.06	11.0	5.936	38.58	39.0	6.541	0.522
Employed	8.75	9.0	2.630	37.00	37.0	1.155	
Unemployed	10.50	11.5	3.590	39.57	39.0	5.331	
Total	10.81	11.0	5.376	38.69	38.5	6.099	
<i>Participation in support group/association</i>							
Yes	11.66	12.0	5.637	38.31	38.5	6.542	0.162
No	10.11	11.0	5.151	39.18	39.0	5.675	
Total	10.77	11.0	5.395	38.79	39.0	6.057	

Kruskal–Wallis and Spearman tests ( $p \leq 0.05$ ).

had low self-esteem and self-image change in relation to other patients. These findings corroborate results of several studies.<sup>2,4,5,7,14,16,19</sup>

In reality, the ostomy and the collector equipment cause a real change in the lives of ostomized people, and this change requires time for acceptance and for self-care learning. The person has the obligation of a daily care of the stoma and its accessories. This task is not easy; they are exposed to contact with a physical deformity caused by surgery and also with the need to directly manipulate their own feces, which leads them to the experience of feelings of low self-esteem. It is also the time when people start to become aware of the limitations caused by the stoma in their activities of daily living.<sup>14</sup>

The coexistence with the collector equipment generates the onset of conflicting feelings, concerns and difficulties to deal with this new situation. There are emotional stages of negation co-responsible for the decline of self-esteem and of self-image, thus causing sensation of mutilation, self-rejection and of peer people, as well as changes in other dimensions, such as mood and anger.<sup>15</sup> I remember again another patient, that confided me, “When I looked in the mirror and saw the collection bag with feces and that I was with a very large volume in the abdomen, I felt very sad, very cross,

very angry. So I put a skirt, looked again in the mirror again I noticed that the bag was appearing. Then I realized what I would do – I had to wear loose clothing.”

Due to the use of the collector equipment, stomized people modify the mode of dressing, using mainly baggy clothes that are intended to hide the use of collector equipment. However, this strategy contributes to a loss in body aesthetics and, consequently, of self-esteem and self-image.<sup>14</sup>

In a study which the perception of patients with colostomy was analyzed regarding the use of the collection bag, the authors found that the relationship between the person with a colostomy and his bag collector is full of negative feelings, significant changes of the physical, psychological and sexual nature, as well as in his web of social relationships.<sup>15,20</sup>

In another conversation, the patient said, “In the beginning, the replacement of the bag and the cleaning of the skin and stoma were things really difficult for me. At first my wife did everything and with time I began to lose the fear and disgust. I am very grateful to my wife; if it was not her, my skin would get wounded. To know how to change the bag, care for and cleaning the skin and stoma are things very important to prevent injuries.” The care with the bag exchange is part of the rehabilitation process, once the individual knows the techniques

and exercises in order to prevent complications and promote comfort and safety.

The care and cleaning of the ostomy and bag exchange in ostomized people are very important to ensure the integrity of the skin and prevent infection. In order to carry out such measures properly, it is necessary that ostomy patients be guided by nursing professionals, so they can develop self-care.<sup>21,22</sup>

The social reintegration of ostomized people is a challenge for the multidisciplinary team involved, so it is important to encourage these people to believe that they are able to live with the new reality that was imposed to them. Therefore, the nurse's action must be based on the acceptance of a coexistence with the ostomy, besides to contribute to maintaining their physical and mental health.<sup>7,23,24</sup>

## Conclusion

In this study, we could conclude that patients who participated in the survey showed a decline in self-image and self-esteem, meaning that these individuals had negative feelings about their own bodies.

When comparing data related to the stoma and sociodemographic profiles with the Rosenberg Self-Esteem Scale/UNIFESP-EPM and Body Investment Scale, we realize that all the patients showed abnormalities (decrease) in self-esteem and self-image, being male individuals over 60 years, married and not attending support groups/associations. With regard to the characteristics of the stoma, those with permanent colostomy had as cause of stoma implantation neoplasms and inflammatory diseases, and their stomata measured between 20 and 40 mm. Their stomata were two-piece devices, and these people were not communicated such that they would be subjected to the stoma and the demarcation was not performed. The participants exhibited significant worsening of self-esteem and self-image in relation to other features.

## Conflicts of interest

The authors declare no conflicts of interest.

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